

IN THE SPECIFICATION

Page 32, amend the paragraph beginning at line 18 as follows:

Black matrix 54 typically includes electrically insulating material in the form of black polymeric material such as blackened polyimide. For example, matrix 54 may consist of one or two patterned layers of blackened polyimide as described in U.S. Patent 6,046,539. Matrix ~~matrix~~ 54 may include chromium or/and chromium oxide. When suitably deposited, the chromium oxide may also be black. In a typical implementation, matrix 54 consists of a lower blackened polyimide layer, an intermediate chromium adhesion layer, and an upper polyimide layer which may be, but need not be, black. Alternatively, matrix 54 may be formed with graphite-based electrically conductive material, e.g., dispersed aqueous graphite, as described in U.S. Patent 5,858,619.

Page 122, amend the paragraph beginning at line 7 as follows:

The electron-emitting device in Figs. 30 and 31 is formed with backplate 40 and overlying layers/regions 42 consisting of lower non-insulating region 100, dielectric layer 102, electron-emissive regions 44 arranged in rows and columns, control electrodes 106, a protective electrically insulating focus-isolating layer 131, ~~130~~, and a patterned getter region 132 which also serves as a system for focusing electrons emitted by electron-emissive elements 104 in regions 44. Components 100, 102, 44, and 106 in the electron-emitting device of Figs. 30 and 31 are configured and constituted the same, and function the same, as in the electron-emitting device of Figs. 19 and 20.

Page 123, amend the paragraph beginning at line 10 as follows:

Portions of electron-focusing getter region 132 extend over portions of control electrodes 106 in the example of Figs. 30 and 31. Insulating focus-isolating layer 131 ~~130~~ is situated between region 132, on one hand, and control electrodes 106, on the other hand, in such a way that region 132 is spaced physically apart from each control electrode 106. In other words, insulating layer 131 ~~130~~ extends over at least part of each electrode 106 and below at least part of region 132. In the typical case where getter region 132 consists of electrically non-insulating material, normally electrically conductive material, region 132 is largely electrically decoupled from each electrode 106.

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Page 123, amend the paragraph beginning at line 23 as follows:

Insulating focus-isolating layer 131 ~~130~~ can be shaped in various ways to enable the electrically non-insulating material of getter region 132 to be largely electrically decoupled from each control electrode 106. In the example of Figs. 30 and 31, insulating layer 131 ~~130~~ is shaped laterally like a waffle that extends laterally somewhat beyond getter region 132 and into focus openings 134. Insulating layer 131 ~~130~~ typically does not extend significantly over any of electron-emissive regions 44. This situation is depicted in Figs. 30 and 31. Nonetheless, layer 130 can extend laterally over regions 44, i.e., over control electrodes 106 to the sides of control openings 116 (not shown in Figs. 30 and 31), as long as doing so does not cause significant image degradation. Rather than being shaped generally like a waffle or grid, insulating layer 130 can consist of multiple laterally separated portions which extend below getter region 132 generally where it extends over portions of electrodes 106.

Page 124, cancel the revision made to the paragraph beginning at line 11 via the Amendment submitted 7 July 2004 and, in place of that revision, amend the paragraph beginning at line 11 as follows:

Fig. 32 depicts a side cross section of a variation of the electron-emitting ~~electron-emitted~~ device of Figs. 30 and 31 in which insulating focus-isolating layer 131 ~~130~~ underlies getter region 132 but does not extend significantly laterally beyond region 132. In fact, insulating layer 131 ~~130~~ can undercut region 132 slightly provided that open space separates region 132 from control electrodes 106 at the under-cut locations. Fig. 32 can represent the situation in which insulating layer 131 ~~130~~ is shaped laterally in largely the same waffle-like pattern as getter region 132 or the situation in which insulating layer 131 ~~130~~ consists of multiple laterally separated portions that underlie getter region 132 largely only where it overlies portions of electrodes 106.

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Page 124, cancel the revision made to the paragraph beginning at line 26 via the 7 July 2004 Amendment and, in place of that revision, amend the paragraph beginning at line 26 as follows:

Electron-focusing getter region 132 is normally considerably thicker than insulating focus-isolating layer 131. ~~130~~. In particular, region 132 is normally at least twice, preferably

at least twenty times, ~~as thick as thicker~~ than insulating layer 131. ~~130~~. Insulating layer 131 ~~130~~ is normally formed with one or more of silicon oxide, silicon nitride, and boron nitride.

Page 126, amend the paragraph beginning at line 18 as follows:

Insulating focus-isolating layer 131 ~~130~~ is formed on top of the structure so as to extend over portions of the precursors to control electrodes 106. A group of openings 136 extend through insulating layer 131 ~~130~~ above the intended locations for electron-emissive regions 44. Each opening 136 is normally present at the location for only one of regions 44. Alternatively, each opening 136 may expose the locations for a column of regions 44. Insulating layer 131 ~~130~~ can be created by various techniques including, e.g., depositing a blanket layer of the desired electrically insulating material on top of the structure and then etching openings 136 ~~130~~ through the blanket layer using a suitable photoresist mask (not shown).

Page 143, amend the paragraph beginning at line 17 as follows:

The structure of Fig. 40b, or a structure similar to that of Fig. 40b can alternatively be created by forming insulating regions 140 at an earlier stage in the fabrication process. For example, regions 140 can be formed at the stage that insulating layer 131 ~~130~~ is created in the process of Fig. 33. In that case, regions 140 may extend laterally beyond getter region 144 and even possibly partway into focus openings 118.

Page 145, amend the paragraph beginning at line 1 as follows:

The electron-emitting device of Fig. 37 can be fabricated by creating the structure of Fig. 40a and then introducing electrically insulating material into openings 144 to form insulating regions 140 as illustrated in Fig. 40b. If any mask is utilized in forming regions 140 at the bottom of openings 144, the mask is removed. Alternatively, the structure of Fig. 40b can be achieved by forming insulating regions 140 at an earlier stage in the fabrication process, e.g., again at the stage where insulating layer 131 ~~130~~ is created in the process of Fig. 33. Irrespective of how the structure of Fig. 40b is achieved, focus coating 110 is subsequently formed on base focusing structure 108, typically by angled physical deposition

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such as angled evaporation, so that coating 110 extends partway down into focus openings 118 and openings 144 for getter regions 142.

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